

ASSIGNMENT-1

Assignment Date	30 september 2022
Student Name	Catherine Devakiruba .P
Student Roll Number	311419106006
Maximum Marks	2 Marks

QUESTION :

Build a smart home in tinkercard use atleast two sensor ,LED, buzzer in a circuit. Simulate in a single code.

Circuit connections:



```
#include <Servo.h>
```

```
int Cabinet = 0;
```

```
int PIRS = 0;
```

```
int Gass = 0;
```

```
int Temps = 0;
```

```
long readUltrasonicDistance(int triggerPin, int echoPin)
```

```
{
```

```
    pinMode(triggerPin, OUTPUT);  // Clear the trigger
```

```
    digitalWrite(triggerPin, LOW); delayMicroseconds(2); //
```

```
    Sets the trigger pin to HIGH state for 10 microseconds
```

```
    digitalWrite(triggerPin, HIGH);  delayMicroseconds(10);
```

```
    digitalWrite(triggerPin, LOW); pinMode(echoPin,
```

```
    INPUT);
```

```
    // Reads the echo pin, and returns the sound wave travel time in microseconds  return
```

```
    pulseIn(echoPin, HIGH);
```

```
}
```

```
Servo servo_5;
```

```
void setup()
```

```

{
    Serial.begin(9600);

    servo_5.attach(5, 500, 2500);

    pinMode(10, INPUT); pinMode(9,
    OUTPUT); pinMode(7, OUTPUT);

    pinMode(A1, INPUT); pinMode(6,
    OUTPUT); pinMode(A0, INPUT);

    pinMode(4, OUTPUT);
}

void loop()
{
    Cabinet = 0.01723 * readUltrasonicDistance(3, 3);

    Serial.println(Cabinet); if (Cabinet < 15) {

    servo_5.write(90); delay(5000); // Wait for 5000
    millisecond(s)

    } else {

    servo_5.write(0);

    }

    PIRS = digitalRead(10);

    Serial.println(PIRS); if
    (PIRS == HIGH) {

    digitalWrite(9, HIGH);

    digitalWrite(7, HIGH);

    } else {

```

```
digitalWrite(9, LOW);    digitalWrite(7,  
  
LOW);  
  
}  
  
Temps = (-40 + 0.488155 * (analogRead(A1) - 20));  
  
Serial.println(Temps); if (Temps >= 30) {    digitalWrite(6,  
  
HIGH);  
  
} else {  
  
digitalWrite(6, LOW);  
  
}  
  
Gass = analogRead(A0);  
  
Serial.println(Gass); if  
  
(Gass  >=  220)  {  
  
digitalWrite(4, HIGH);  
  
} else {  
  
digitalWrite(4, LOW);  
  
}  
  
}
```